

REMARKS

This application has been carefully reviewed in light of the Office Action dated July 28, 2004. Claims 36 to 61, 80 to 86, 99 to 105, 117, 118 and 123 to 147 are pending in the application, of which Claims 36, 80, 99, 117, 123, 125, 126, 136, 146 and 147 are independent. Reconsideration and further examination are respectfully requested.

Claims 36 to 75, 77 to 86, 90, 96 to 105, 109, 117, 118, 123 to 130, 132 to 136, 138 to 140 and 142 to 147 were rejected under 35 U.S.C. § 102(b) as being anticipated by “Pad An Alternative Approach to the Computer Interface” (Perlin); Claims 76, 87 to 89 and 106 to 108 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Perlin in view of “Pad++: A Zooming Graphical Interface for Exploring Alternate Interface Physics” (Bederson); Claims 131, 137, and 141 were rejected under 35 U.S.C. § 112, second paragraph, for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Reconsideration and withdrawal of these rejections are respectfully requested.

The present invention concerns displaying hierarchical data in an intuitive manner. To do so, a display area is divided into an area for displaying icons representing parent data at a particular hierarchical level and a second area for displaying icons representing child data related to the parent data at a deeper hierarchical level. The child data is displayed in a nesting format, with icons representing data from deeper hierarchical levels displayed as smaller and simpler icons within other icons. In this manner, a user gains an intuitive sense as to both the relationships between the hierarchical data and the hierarchical distance between related data. This type of interface may be applied to a variety of data such as file system data showing the relationship of directories to files and other directories or to time-series data showing the time dependencies of various data.

Turning to specific claim language, amended independent Claim 36 is directed to a hierarchical data display method for displaying hierarchically-managed data items. The method includes the steps of dividing a display area into an area in which a data icon representing a data item belonging to one level is displayed, and an area in which data icons, at least including a data icon representing a data item belonging to a child level and another data icon representing a data item belonging to a level lower than the child level, are displayed, and displaying the data icons with a size varied depending on a hierarchical depth and at a position so that a hierarchical relation between the data icons is represented as a nesting shape.

Thus, amended independent Claim 36 includes the feature of a first display area in which a data icon representing a data item belonging to one level is displayed, and a second display area in which data icons, including a data icon representing a data item belonging to a child level and another data icon representing a data item belonging to a level lower than the child level, are displayed. In contrast, Perlin discloses a much more limited type of display. Perlin discloses a display having both year-text and month-text. (See Fig. 3 of Perlin.) Therefore, Perlin only displays data icons in both year level and month level and neither discloses nor suggests a data icon representing a data item belonging to a child level and another data icon representing a data item belonging to a level lower than the child level.

In light of the above-described deficiencies of the cited art, Applicants submit that amended independent Claim 36 is now in condition for allowance and respectfully request same.

Amended independent Claims 49, 117 and 125 are directed to a hierarchical data browser system, a computer program product and a hierarchical data browser system, respectively, that substantially incorporate the features of Claim 36. Applicants submit that the discussion from above in regard to Claim 36 applies equally to Claims 49, 117 and 125. As

such, Applicants submit that Claims 49, 117 and 125 are now in condition for allowance and respectfully request same.

Turning now to amended independent Claim 80, Claim 80 is directed to an image editing method for a hierarchical data management system for managing a plurality of data items hierarchically, comprising the steps of: displaying data icons serving as data identification information with a size made different in hierarchical order; accessing data corresponding to a desired data icon by designating said desired data icon; and displaying a data icon representing data whose access frequency is relatively larger with a size relatively larger than a size of other data icons in a same hierarchical level.

The method of amended independent Claim 80 includes the feature that a data icon representing data whose access frequency is relatively larger is displayed with a size relatively larger than a size of other data icons in a same hierarchical level. This feature is supported by Figs. 87B and 90 and the description at page 119, line 9 to page 126, line 3. In Fig. 87B, the size of data icon E-1 is larger than that of data icon E-2 in the same hierarchical level E.

In contrast, Perlin only discloses a zooming function. (See Section 1.3, page 58 of Perlin.) There is no disclosure nor suggestion by Perlin to enlarge a data icon corresponding to access frequency of the data that the icon represents. That is, as shown in Fig. 1 of page 59, Perlin only discloses enlarging data in an area including a mark at the request of a user so that the mark and the image surrounding the mark are displayed at a higher magnification. Therefore, the disclosure of Perlin is limited to displaying data in an enlarged manner in which only data at the same hierarchical level is enlarged. For example, “Cost of Sales” in the middle level and “00” are displayed in the same manner as the other icons that are also enlarged together with the selected mark.

Therefore, Perlin fails to disclose or suggest at least the feature of displaying a data icon representing data whose access frequency is relatively larger, with a size relatively larger than a size of other data icons in a same hierarchical level of Claim 80. Accordingly, Applicants submit that amended independent Claim 80 is now in condition for allowance and respectfully request same.

Amended independent Claims 99 and 123 are directed to an image editing system and a computer program product, respectively, that are substantially in accordance with the method of Claim 80. Applicants submit that the discussion from above in regard to Claim 80 applies equally to Claims 99 and 123. As such, Applicants submit that Claims 99 and 123 are now in condition for allowance and respectfully request same.

Turning now to amended independent Claim 126, Claim 126 is directed to a hierarchical data display method of displaying hierarchically-managed data items, comprising the steps of: setting exclusively in a background indicating the parent level, a first area in which data item(s) belonging to a parent level is displayed and a second area in which data item(s) belonging to a child level is displayed, in a display area of every level; controlling a display of data icons respectively representing the data items in each of the areas; and controlling a display so that when designating a data icon, detail information of data identified by the designated data icon is displayed, when designating a display area, the designated display area is zoomed up and a data icon(s) representing data item(s) belonging to a level of the designated display area is displayed, and when designating the zoomed up display area for zoom out operation, a zoom out from the zoomed up display area to the display area of a parent level is performed.

As amended, Claim 126 includes the features of a display of detail information, wherein zoom up and zoom out are performed based on different operations, respectively, when

designating a data icon, when designating a display area, and when designating the zoomed up display area for a zoom out operation. These features are supported, for example, by Figs. 20 to 23 and the description at page 75, line 21 to page 77, line 14, and by Fig. 24 and the description at page 77, lines 15 to 26.

As the cited references fail to disclose, neither alone nor in combination, such a zooming display feature driven by the data levels, Applicants submit that Claim 126 is now in condition for allowance and respectfully request same.

Amended Claims 136, 146 and 147 are directed to a hierarchical data display apparatus, a program executable by a computer and a computer-readable storage medium, respectively, substantially in accordance with the method of Claim 126. Applicants submit that the discussion from above in regard to Claim 126 applies equally to Claims 136, 146 and 147. As such, Applicants submit that Claims 136, 146 and 147 are now in condition for allowance and respectfully request same.

Dependent Claim 137 has been amended to depend from Claim 136. Dependent Claims 131 and 141 have been amended to indicate the final function of the limitations. Applicants submit that Claims 131, 137 and 141 are now in condition for allowance and respectfully request same.

The other pending claims in this application are each dependent from the independent claims discussed above and are therefore believed patentable for the same reasons. Because each dependent claim is also deemed to define an additional aspect of the invention, however, the individual consideration of each on its own merits is respectfully requested.

In light of the foregoing amendments and remarks and no other matters being raised, the entire application is believed to be in condition for allowance, and such action is respectfully requested at the Examiner's earliest convenience.

Applicants' undersigned attorney may be reached in our Costa Mesa, CA office at (714) 540-8700. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,



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